# A Review and Empirical Comparison of Two Treatments for Adolescent Males With Conduct and Personality Disorder: Mode Deactivation Therapy and Cognitive Behavior Therapy

*Jack A. Apsche*
*Christopher K. Bass*
*Jerry L. Jennings,*
*Alexander M. Siv*

This research study compared the efficacy of two treatment methodologies for adolescent males in residential treatment with conduct disorders and/or personality dysfunctions and documented problems with physical and sexual aggression. The results showed that Mode Deactivation Therapy, an advanced form of cognitive behavioral therapy based on Beck's theory of modes, was superior to Cognitive Behavioral Therapy in reducing both physical and sexual aggression. At the same time, Mode Deactivation Therapy was the only treatment of the three that significantly reduced sexual aggression for these youth. The results also showed that MDT was superior to CBT in reducing external and internal psychological distress as measured by DSMD and CBCL.
Keywords: CBT, MDT, Conduct Disorder, Aggression

---

Adolescents with conduct disorders and personality traits have proven to be extremely difficult to conceptualize and treat effectively. Many of these youth typically come from deprived environments with multiple stressors and often extensive histories of physical, emotional and sexual victimization and neglect. As a group, conduct disordered youth present with an complex array of recurrent behavioral problems, including aggression, bullying, violence, intimidation, delinquency, rule violations, recklessness, property destruction, callous disregard for others, substance abuse, sexual abuse and other disruptive and anti-social behaviors (Kazdin and Weisz, 2003). In fact, the prevalence rate for conduct disorder is 6% to 16% for males under age 18 and it is one of the most frequent problems diagnosed in outpatient and inpatient mental health programs. Moreover, 80% of these youth are likely to meet criteria for psychiatric disorders in the future (Kazdin and Weisz, 2003). For example, a longitudinal study by Johnson, Cohen, Brown, Smailes, and Bernstein (1999) showed a clear connection between childhood maltreatment and the development of cluster B personality disorders in later adolescence. Moreover, conduct disorder is by far the most frequent psychiatric diagnosis given to youth involved in the juvenile justice system with rates as high as 81% to 91% of incarcerated youth (Boesky, 2002).

Dodge, Lochman, Harnish, Bates and Petti (1997) have contributed a useful distinction between two types of conduct disordered youth: "Reactive aggressive" youth show extremely strong emotional responses to perceived threats and then react aggressively. The second type, "proactive aggressive" youth, initiate or use violence and aggression in an instrumental fashion to gain an objective or "pay-off." The former category appear to share a common characteristic pattern of "emotional dysregulation," in which the youth is overwhelmed by a sudden surges of intense emotions, sensations and irrational thoughts that are occur in combination and are disproportionate to the situation.

Koenigsberg, Harvey, Mitropoulou, Antonia, Goodman, Silverman, Serby, Schopick and Siever (2001) found that many types of aggression, including self-destructive behavior, are linked to the personality disordered traits of affective instability and impulsivity (i.e., emotional dysregulation). Our research and clinical experience with violent and sexually aggressive youth suggests that this common phenomenon of "emotional dysregulation" is the same process that Aaron Beck (1996) has described as "modes" and that treatment must be modified to accommodate and address this process in order to be effective.

**Need for Effective Treatment**

Given the prevalence of conduct disorders and its major contribution to juvenile crime, societal violence, delinquency and sexual violence, there is a urgent need for effective treatment methods for such youth. While Kazdin and Weisz (2003) delineates some evidence-based treatment practices for children with Conduct Disorder, the same has been not achieved for adolescents over 14 years old. In recent years, Multisystemic Treatment has shown promise for antisocial youth (Henggeler, Schoenwald, Borduin, Rowland and Cunningham, 1998) and for adolescent sex offenders (Swenson, Henggeler, Schoenwald, Kaufman, and Randall, 1998), but it requires a resource-rich combination of services, one of which is psychotherapy, and it is not a realistic option for most such youth. Cognitive behavioral therapy (CBT) is widely employed in the treatment programs for behaviorally disordered youth across many settings and is frequently used with aggressive youth and adolescent sex offenders. But there are clear limits to the effectiveness of CBT in the treatment of personality disordered clients, especially borderline and narcissistic types (e.g., Young, Klosko and Weishaar, 2003).

Apsche and his colleagues developed an advanced form of cognitive behavioral treatment called "Mode Deactivation Therapy" (Apsche and Ward Bailey, 2004a) in order to simultaneously address the multiple problems issues of conduct- and personality-disordered youth, while also accommodating the particular defensive characteristics of the adolescent. Mode Deactivation Therapy (MDT) has been applied to adolescent sex offenders and mentally ill adolescents alike. MDT is an evidence-based treatment that blends key elements from Beck's theory of "modes" (Beck, 1996); traditional Cognitive Behavioral Therapy and Schema Therapy (Alford and Beck, 1997; Beck and Freeman, 1990); Dialectical Behavior Therapy (Linehan, 1993); and Functional Analytic Behavior Therapy (Kohlenberg and Tsai, 1993; Nezu, Nezu, Friedman and Haynes, 1998).

**Beck's Theory of "Modes"**

Recognizing that his earlier model of cognitive schemas was inadequate to explain a number of psychological problems, Beck (1996) introduced the concept of "modes" in his article, "Beyond belief: A theory of modes, personality and psychopathology." Beck conceives of "modes" as sub-organizations of the personality, which are comprised of integrated networks of cognitive, affective, motivational and behavioral components, that have developed through experience as an "automatic" response to particular types of situations, notably perceived threats (Beck, 1996; Apsche, 2004). Thus, modes are consistent, coordinated, self-protective response systems for an

individual, which are controlled by schema. Moreover, modes are charged (or "cathected") such that some schemas are more intensive and powerful than others in driving responses to perceived threat.

In Beck's theory, when an individual is faced with a perceived danger or potential threat, his orienting schema can activate a dysfunctional "mode" with all its simultaneous aspects – a particular conglomerate of beliefs, emotions, motivation, and behavior (Apsche, 2004). Dysfunctional modes are typically characterized by high levels of anxiety, fear, irrational thoughts and feelings, and aberrant behaviors. Further, "modes" are self-reinforcing and maintained by a group of fundamental beliefs. For this population, individuals have developed maladaptive orienting schemas and modes as protective strategies in response to their traumatic and abusive life experiences. Originally these modes were useful survival strategies that protected the individual from distress and threat, but they have become ingrained, virtually automatic, maladaptive responses.

As repeated victims of various trauma, neglect and abuse, these youth are ultra-sensitive to learned experiential cues, often unconscious, that signal danger and vulnerability. Alford and Beck (1997) refer to this phenomenon in describing how the schema that typify personality disorders operate on a more continuous basis and are more sensitive to triggering events. Hence, such individuals are always ready to defend and/or attack at the first sign of perceived danger. In short, when faced with a perceived risk of victimization/vulnerability, such individuals are unable to override the primal, automatic "mode" response by employing cognitive controls because they are instantaneously flooded with powerful feelings, sensations and fear.

**Mode Deactivation Therapy (MDT)**

Mode Deactivation Therapy is designed to disrupt ("de-activate") the pre-established maladaptive cognitive/affective/motivational/behavioral response set ("mode") that is automatically triggered by the situational occurrence of the orienting schema. For example, a youth has the orienting schema that, "You can't trust anyone because you will be betrayed" and he is in the situation of developing more closeness with a peer or staff person in the treatment program. For this youth, his orienting schema would trigger a maladaptive "mode" in which the youth may become anxious, have intense physiological sensations, have paranoid thoughts that the person is "out to get me" and start to withdraw or act aggressively.

Apsche and his colleagues in numerous studies have repeatedly found that traditional cognitive behavioral therapy was not adequate to the instantaneous, primal and extremely powerful effects of maladaptive "modes" with conduct disordered and personality disordered adolescents. Similarly, in using CBT with Axis II disorders, Young, Klosko and Weishaar (2003) found that personality-disordered clients, especially borderline and narcissistic, continue to experience significant emotional distress following treatment. Apsche observed that most aggressive and sexually aggressive youth tend to lose control with such sudden primal intensity that they are unable to

tolerate the traditional procedures of cognitive restructuring. Moreover, cognitive behavioral therapy itself needed to be modified to accommodate the adolescent's natural developmental sensitivities to resisting authority in the therapeutic relationship.

Consequently, Apsche and his colleagues blended methods from three proven treatment models – Cognitive Behavioral Therapy, Dialectical Behavior Therapy, and Functional Analytic Behavioral Therapy – to create an advanced form of cognitive behavioral therapy called "Mode Deactivation Therapy" (MDT).

**Elements from Cognitive Behavioral Therapy**: As described above, the term "mode de-activation" itself derives from Beck's (1996) term "modes" and uses his cognitive behavioral theoretical formulation of "modes." MDT shares the basic tenets of classic cognitive behavior therapy, including "Schema Therapy," which holds that internal schemas are at the core of the personality disorders (Young, Klosko and Weishaar, 2003). MDT agrees that aberrant behavior derives from dysfunctional schema that trigger "modes," but it takes a radically different approach to correcting such schema. Unlike cognitive therapy, MDT does not directly challenge the irrationality of the orienting schema by "arguing" the concepts of cognitive distortions. Even when the therapist has a good rapport, such youth are acutely sensitive to the power dynamic of being in a one-down position. Given their histories of victimization, they typically have serious difficulties with interpersonal trust. Challenging the reality of a youth's beliefs and perceptions is negatively experienced as an attack on his esteem, his world-view and his fragile sense of self. Developmentally, such youth perceive the cognitive therapist as another adult trying to impose their authority and force him to change. Adolescents bristle and respond poorly to direct cognitive corrections – even when such interventions seem to be delivered in the most gentle and collaborative fashion. Cognitive therapy then, as it is normally practiced, can trigger a negative response that undermines progress (Apsche and Ward Bailey, 2004a).

**Elements from Dialectical Behavior Therapy:** To accommodate this developmental and clinical barrier to traditional cognitive therapy, MDT uses two key principles from Dialectical Behavior Therapy (Linehan, 1993), which was originally developed to treat extremely unstable and volatile patients with severe personality disorders. Dialectical Behavior Therapy (DBT) uses the technique of *radical acceptance* in which the therapist elucidates and validates the unique "truth" in each individual's perceptions. Rather than directly challenging the validity or empirical support for the youth's beliefs and perceptions, MDT uses radical acceptance in fully validating the "grain of truth" of the individual adolescent's beliefs based on his life experiences and trauma history. The goal is to join with the youth in order to discover how the belief system is a legitimate reflection of the youth's life experience, relationships, sense of self and world view. Subsequently, given radical acceptance and increased trust, the therapist can use the therapeutic relationship as well as the youth's direct experiences in the treatment program to show how beliefs can be modified based on corrective therapeutic experiences. MDT also adopts the technique of *balancing* from Dialectical Behavior Therapy. This is an interactive method of introducing increasing flexibility or balance in

the individual's rigid and maladaptive dichotomous (either/or) beliefs by redirecting the person to considering a continuum of truth or a continuum of possibilities.

**Elements from Functional Analytic Behavioral Therapy:** MDT also incorporates principles from Functional Analytic Behavioral Therapy (Kohlenberg and Tsai, 1993). First, MDT aligns with FAB in affirming that perceptions of reality and unconscious motivations evolve from past contingencies of reinforcement, such as families of origin. Second, MDT uses an assessment and Case Conceptualization method that combines elements from Beck's (1996) case conceptualization and the Factor Analytic Behavior Therapy model of Nezu, Nezu, Friedman and Haynes (1998). The assessment and case conceptualization procedure concentrates on core beliefs, fears and avoidance behaviors that are reflective of the Post-Traumatic Stress Disorder and developing personality disorders (see Apsche and Ward Bailey, 2003, 2004b, 2004c).

One crucial difference between Mode Deactivation Therapy and Cognitive Behavioral Therapy is that the core beliefs (or schemas) of the individual are *not* seen and challenged as dysfunctional because this action necessarily invalidates the person's life experience. Instead, in MDT, core beliefs are consistently validated as legitimate creations from the person's life experience (no matter how irrational and even if they have little more than a tiny "grain of truth"), which are then "balanced" through the collaborative therapeutic process to deactivate the maladaptive mode responses.

Another difference between MDT and CBT is that MDT uses the "balance the belief" technique to remediate the youth's emotional disreguation. MDT also uses a validation, clarify, technique (VCR). The VCR, uses unconditional acceptance and validation of the youth's cognitive unconscious, or out of awareness learn experience. Given the youth's background and history MDT espouses that he is exactly where and how he should be as a person with his history. The clarification offers and alternative explanation of the youth's circumstances and history, as the redirection measures the "youth possible acceptance" of a slightly different belief.

The present study was designed to assess the effectiveness of Mode Deactivation Therapy (MDT) as compared to Cognitive Behavior Therapy (CBT) in the treatment of conduct disordered and personality-disorder youth with problems of aggression and sexual aggression.

## METHOD

### Sample Characteristics

A total of 40 male adolescents participated in the study. All subjects were referred to the same residential treatment facility for the treatment of aggression and/or sexual aggression. In this study, subjects were randomly assigned to one of the two treatment conditions at the time of admission based on available openings in the caseload of the participating clinicians. The three treatment conditions showed similarity in terms of the frequency of Axis I and Axis II diagnoses, age, and racial background. To ensure

consistency in the delivery of the two respective treatments, therapists were specifically trained in the one of the three treatment curriculums/methods. The average length of residential treatment across all conditions was roughly 11 months.

**Condition one: Cognitive Behavioral Therapy (CBT):** A total of nineteen male adolescents were assigned to the CBT condition. The group was comprised of 14 African Americans, 4 European Americans and 1 Hispanic American with an average age of 14.5. The principal Axis I diagnoses for this group included Conduct Disorder (14), Oppositional Defiant Disorder (4), and Post Traumatic Stress Disorder (7). Axis II diagnoses for the group included Mixed Personality Disorder (4), Borderline Personality Disorder (2), Narcissistic Personality Disorder (1) and Dependent Personality Disorder (1).

The particular CBT methodology used for this group employed a published treatment curriculum and workbook system for adolescent sex offenders called "Thought Change" (Apsche, 1999, Apsche, Evile and Murphy, 2004). This structured treatment program is specifically designed for personality disordered and conduct-ordered youth with psychosexual disturbances and high levels of aggression and violence. Components of this psycho-educational treatment curriculum included daily recording of negative thoughts, cognitive distortions, cognitive restructuring, sexual offense patterns and beliefs, aggressive patterns and beliefs, mood management, dysfunctional beliefs, taking responsibility, mental health maintenance, substance abuse issues, and victim empathy.

**Condition two: Mode Deactivation Therapy (MDT):** A total of twenty-one male adolescents were assigned to the MDT condition. The group was comprised of 15 African Americans, 5 European Americans and 1 Hispanic American with an average age of 16.5. The principal Axis I diagnoses for this group included Conduct Disorder (15), Oppositional Defiant Disorder (2), Post Traumatic Stress Disorder (7), and Major Depressive Disorder, primary or secondary (5). Axis II diagnoses for the group included Mixed Personality Disorder (6), Borderline Personality Traits (3), and Narcissistic Personality Traits (2). The MDT condition used the methodology described earlier in this paper.

| **Axis I** | **CBT** | **MDT** |
|---|---|---|
| Conduct Disorder | 14 | 15 |
| Oppositional Defiant Disorder | 4 | 2 |
| Post Traumatic Stress Disorder | 7 | 7 |
| Major Depression | 0 | 5 |
| **Axis II** | | |
| Mixed Personality Disorder | 4 | 6 |
| Borderline Personality Traits | 2 | 3 |
| Narcissistic Personality Traits | 2 | 2 |
| Dependent Personality Traits | 1 | 0 |
| Avoidant Personality Traits | 0 | 0 |
| **Race** | | |

| | | |
|---|---|---|
| African American | 14 | 15 |
| European American | 4 | 5 |
| Hispanic/Latino American | 1 | 1 |
| Total | 19 | 21 |
| **Average Age** | 14.5 | 16.5 |

## MEASURES

The key measures of physical and sexual aggression used in this study consisted of Daily Behavior Reports and Behavior Incident Reports. The Daily Behavior Reports were completed by all levels of staff, both professional and paraprofessional, across all settings of the residential treatment program (e.g., schoolroom, psychoeducational classes, treatment activities, residential dormitories, etc.). The Behavior Incident Reports were only completed by staff following the occurrence of serious or critical incidents, namely, acts of physical and sexual aggression. Inter-rater reliability in the use of the measures was determined by independently totaling the number of physical and sexual aggression incidents on both the Daily Behavior Report cards and the Behavior Incident Report forms and calculating the percentage of agreement. The agreement for this study was at the 98% level.

The baseline ("pre-treatment") measure of physical and sexual aggression consisted of the average number of incidents per week that occurred during the first 60 days following admission and the post-treatment measure was the rate of occurrence during the 60 day period prior to discharge.

Two assessments were used to measure the behavior of the residents, which included the Child Behavior Checklist (CBCL; Achenbach, 1991) and the Devereux Scales of Mental Disorders (DSMD; The Devereux Foundation, 1994).

The CBCL is a multiaxial assessment designed to obtain reports regarding the behaviors and competencies of 11 – to – 18 year olds. The means and standards are divided into three categories: internalizing (which measures withdrawn behaviors, somatic complaints, anxiety and depression), externalizing (which measures delinquent behavior and aggressive behavior), and total problems (which represent the conglomerate of total problems and symptoms, both internal and external).

The DSMD illustrates level of functioning in comparison to a normal group, via behavioral ratings. T scores have a mean of deviation of 10; a score of 60 or higher indicates an area of clinical concern.

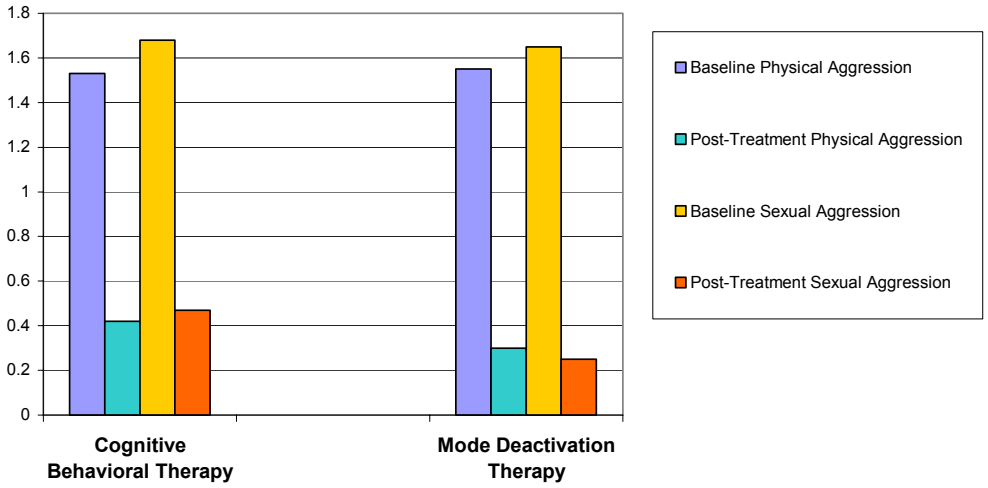
**TABLE 2. Descriptive Statistics**

| Measure | Tx Type | N | Mean | Std. Dev. | Std. Error | 95% confidence Interval | | Min | Max |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Lower bound | Upper Bound | | |
| Baseline Physical Aggression | CBT | 19 | 1.53 | .513 | .118 | 1.28 | 1.77 | 1 | 2 |
| | MDT | 20 | 1.55 | .510 | .114 | 1.31 | 1.79 | 1 | 2 |
| | | | | | | | | | |
| | Total | 39 | 1.56 | .501 | .065 | 1.43 | 1.69 | 1 | 2 |
| | | | | | | | | | |
| Baseline Sexual Aggression | CBT | 19 | 1.68 | .478 | .110 | 1.45 | 1.91 | 1 | 2 |
| | MDT | 20 | 1.65 | .489 | .109 | 1.42 | 1.88 | 1 | 2 |
| | | | | | | | | | |
| | Total | 39 | 1.67 | .471 | .061 | 1.56 | 1.80 | 1 | 2 |
| | | | | | | | | | |
| Post-Treatment Physical Aggression | CBT | 19 | .42 | .507 | .116 | .18 | .67 | 0 | 1 |
| | MDT | 20 | .30 | .470 | .105 | .08 | .52 | 0 | 1 |
| | | | | | | | | | |
| | Total | 39 | .41 | .495 | .065 | .28 | .54 | 0 | 1 |
| | | | | | | | | | |
| Post-Treatment Sexual Aggression | CBT | 19 | .47 | .513 | .118 | .23 | .72 | 0 | 1 |
| | MDT | 20 | .25 | .444 | .099 | .04 | .46 | 0 | 1 |
| | | | | | | | | | |
| | Total | 39 | .41 | .495 | .065 | .28 | .54 | 0 | 1 |

Thus, the first analysis suggests that all types of treatment – Mode Deactivation Therapy and Cognitive Behavioral Therapy – had a positive effect of reducing rates of physical and sexual aggression over the course of treatment (see Table 3).

**Table 3, Next Page**

## Table 3. Reduction in Rates of Physical and Sexual Aggression Across Treatments




The second analysis looked at significant differences in treatment effectiveness between the two treatment conditions. It was hypothesized that adolescent male aggressive sexual offenders would show greater improvements in terms of aggressive and sexual acting out behavior when treated with MDT as compared to CBT. To test this hypothesis, a one way analysis of variance (ANOVA) was conducted on the baseline and post-treatment measures of physical and sexual aggression. Both post-treatment physical aggression and post-treatment sexual aggression were significantly affected by type of treatment, $F(2, 56) = 8.32$, $p < .01$ (post-treatment aggression); $F(2, 56) = 10.02$, $p < .01$ (post-treatment sexual aggression).

**Table 4, next page**

**Table 4. ANOVA -- Difference in Outcomes Between MDT and CBT**

| Measure | | Sum of Squares | Df | Mean Square | F | Signif. |
|---|---|---|---|---|---|---|
| Baseline Physical Aggression | Between Groups | .707 | 2 | .353 | 1.413 | .252 |
| | Within Groups | 14.005 | 56 | .250 | | |
| | Total | 14.712 | 58 | | | |
| | | | | | | |
| Post-Treatment Physical Aggression | Between Groups | 3.299 | 2 | 1.649 | 8.316 | .001 |
| | Within Groups | 11.108 | 56 | .198 | | |
| | Total | 14.407 | 58 | | | |
| | | | | | | |
| Baseline Sexual Aggression | Between Groups | .537 | 2 | .269 | 1.074 | .349 |
| | Within Groups | 14.005 | 56 | .250 | | |
| | Total | 14.542 | 58 | | | |
| | | | | | | |
| Post-Treatment Sexual Aggression | Between Groups | 3.483 | 2 | 1.742 | 10.017 | .000 |
| | Within Groups | 9.737 | 56 | .174 | | |
| | Total | 13.220 | 58 | | | |

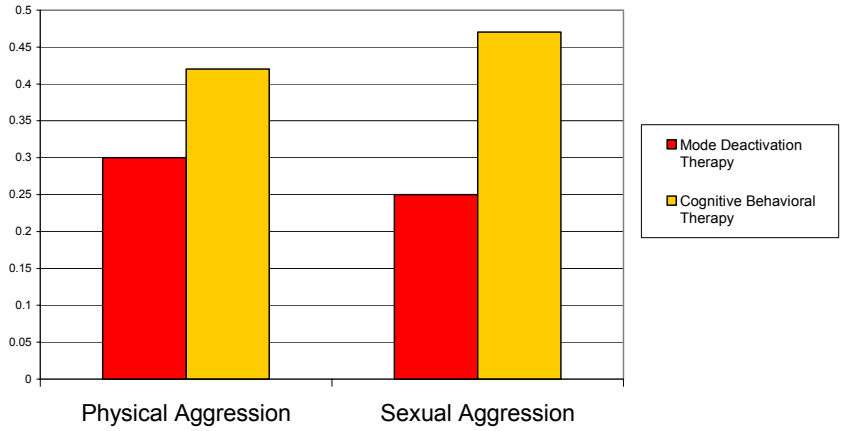
To better elucidate between-group differences in magnitude of effect, independent factorial analyses on treatment model and variable were conducted.

With an overall percent reduction of 80.7% in rates of post-treatment physical aggression, Mode Deactivation Therapy was found to be superior to Cognitive Behavioral Therapy at 72.6%. The greater magnitude of effect for MDT was statistically significant compared to CBT.

The most dramatic difference between treatment groups was found in reduction of post-treatment rates of sexual aggression. In this instance, *only* Mode Deactivation Therapy showed a statistically significant reduction in rates of sexual aggression from baseline to post-treatment. MDT showed a reduction of 84.5% in sexual aggression compared to CBT at 72.0%. Post-treatment rates of sexual aggression were .30 for MDT and .42 for CBT. The differences were significant using an independent *T*-test comparing, CBT and MDT. The *T* test showed $T = 2.21$, $df = 39$, $p = .01$. The results clearly show that MDT produced significantly superior results when compared to CBT. These differences in magnitude of effect are graphically represented in Table 6.

| | MDT | | CBT | |
|---|---|---|---|---|
| | Post-Treatment Score | Percent reduction | Post-Treatment Score | Percent reduction |
| Physical Aggression | .30 | 80.7% | .42 | 72.6% |
| Sexual Aggression | .25 | 84.5% | .47 | 72.0% |

**Table 6. Post-Treatment Reduction in Rates of Aggression Across Two Treatment Conditions**




The CBCL is a multiaxial assessment designed to obtain reports regarding the behaviors and competencies of 11 – to – 18 year olds. The means and standards are divided into three categories: internalizing (which measures withdrawn behaviors, somatic complaints, anxiety and depression), externalizing (which measures delinquent behavior and aggressive behavior), and total problems (which represent the conglomerate of total problems and symptoms, both internal and external).

The DSMD uses T scores with a mean of 50 and a standard deviation of 10; any T score over 60 is considered clinically significant. The means and standards are divided into four scales and analyzed: (1) Internalizing (which measures negative internal mood, cognition, and attitude), (2) Externalizing (which measures prevalence of negative overt behavior or symptoms), (3) Critical Pathology (which represents the severe and disturbed behavior in children and adolescents), and Total (which represent the conglomerate of all

scores including general Axis I pathology, delusions, psychotic symptoms, and hallucinations).

**Table 7. T- scores, ranges, and standard deviations in all measures for both groups**

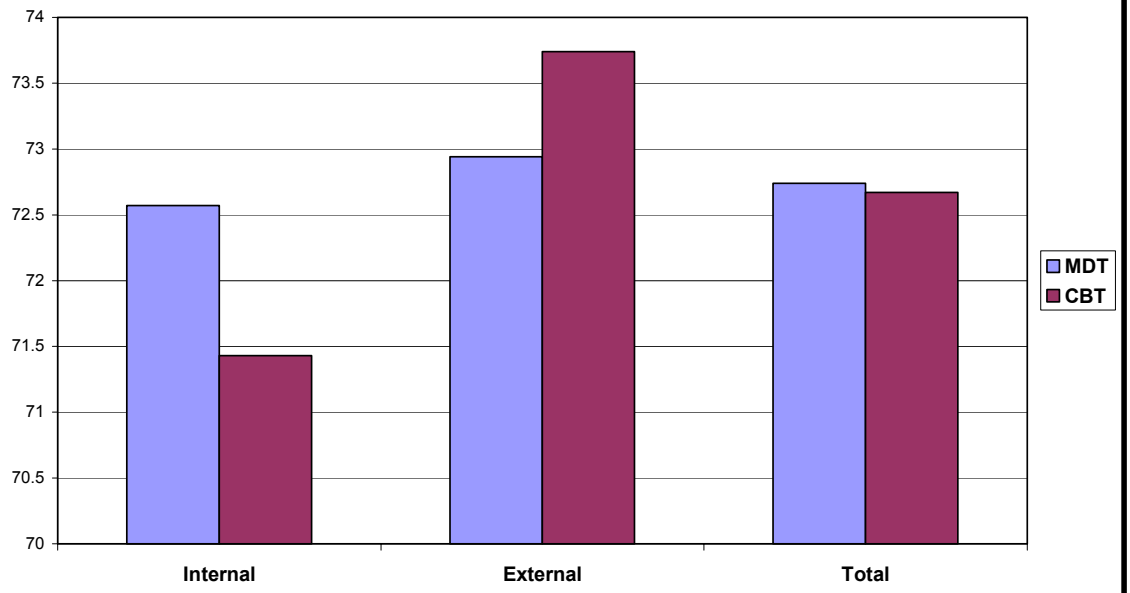
| Measure | Scale | CBT | MDT |
|---|---|---|---|
| Child Behavior Checklist (CBCL) Pre-Treatment | Internal | 71.43 (Range = 66 - 84) | 72.57 (Range = 68 - 86) |
| | External | 73.74 (Range = 66 - 86) | 72.94 (Range = 64 - 86) |
| | Total | 72.67 | 72.74 |
| | | | |
| Child Behavior Checklist (CBCL) Post-Treatment | Internal | 63.66 (Range = 55 - 80) SD = 10.04 | 51.75 (Range = 39 - 71) SD = 12.10 |
| | External | 65.63 (Range = 52 - 82) SD = 10.76 | 50.04 (Range = 37 - 69) SD =11.74 |
| | Total | 64 (Range = 52 – 84) SD = 9.24 | 51.00 (Range = 40 – 61) SD =10.28 |
| | | | |
| DSMD Pre-Treatment | Internal | 70.5(Range = 62- 84) | 71.3(Range = 64- 83) |
| | External | 73.1(Range = 64- 86) | 72.5(Range = 67- 84) |
| | Critical Path | 68.7(Range = 58- 88) | 70.5(Range = 60- 86) |
| | Total | 70.77 | 71.50 |
| | | | |
| DSMD Post-Treatment | Internal | 61.70(Range = 52- 74) | 49.70(Range = 46- 56) |
| | External | 57.81(Range = 52- 72) | 45.88(Range = 41- 54) |
| | Critical Path | 50.21(Range = 46- 66) | 46.15(Range = 42- 56) |
| | Total | 58.00(Range = 56- 82) | 46.15(Range = 40- 56) |

Mean scores on all scales are at least one standard deviation less.

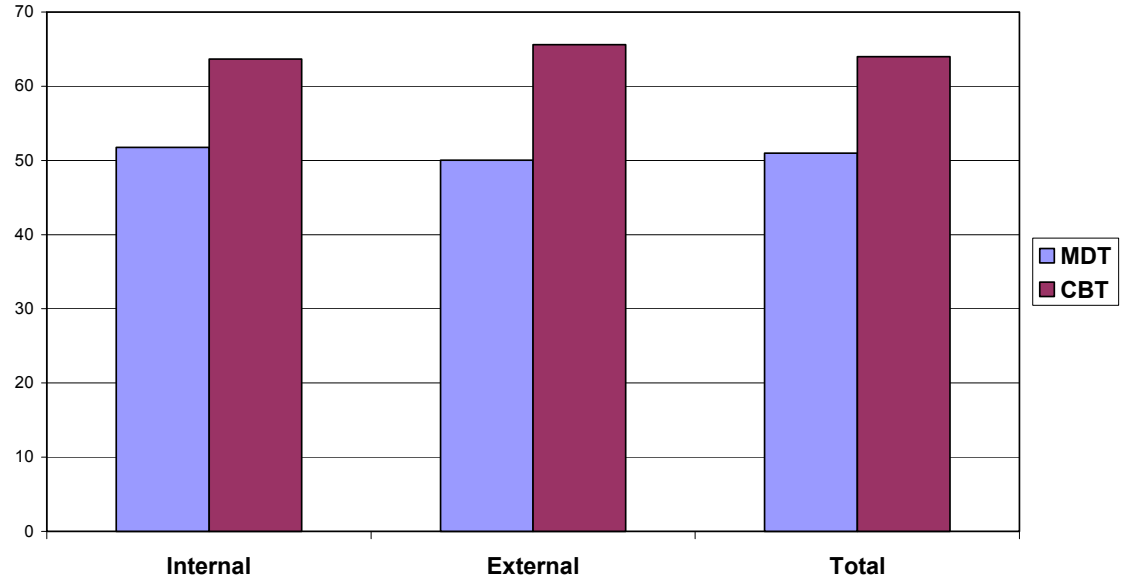
At the time both CBCL and DSMD assessments, of the two groups differed significantly. Residents who participated in MDT had lower scores on all measures then did residents who engaged in CBT.

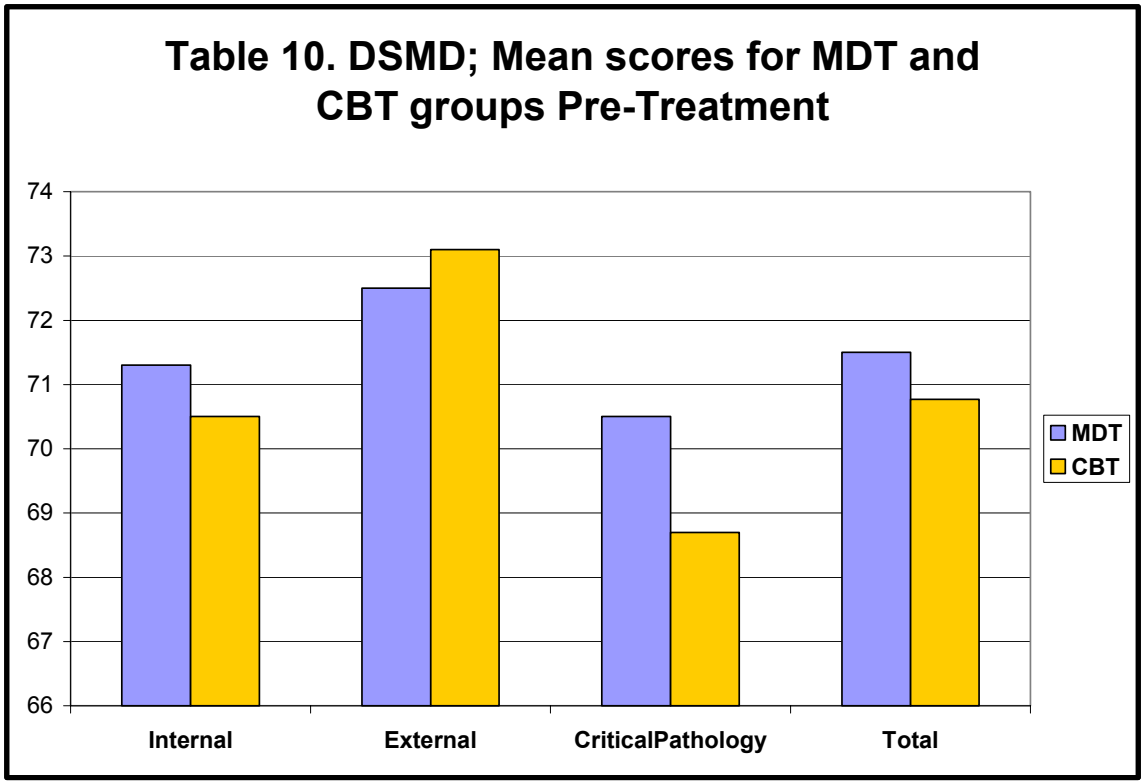
The results indicate that the mean scores the internalizing factor, externalizing factor, critical pathology, and total score for the MDT group is at or near one standard deviation below the CBT group.

## Table 8. CBCL; Mean scores for MDT and CBT groups Pre-Treatment




## Table 9. CBCL; Mean scores for MDT and CBT groups Post-Treatment





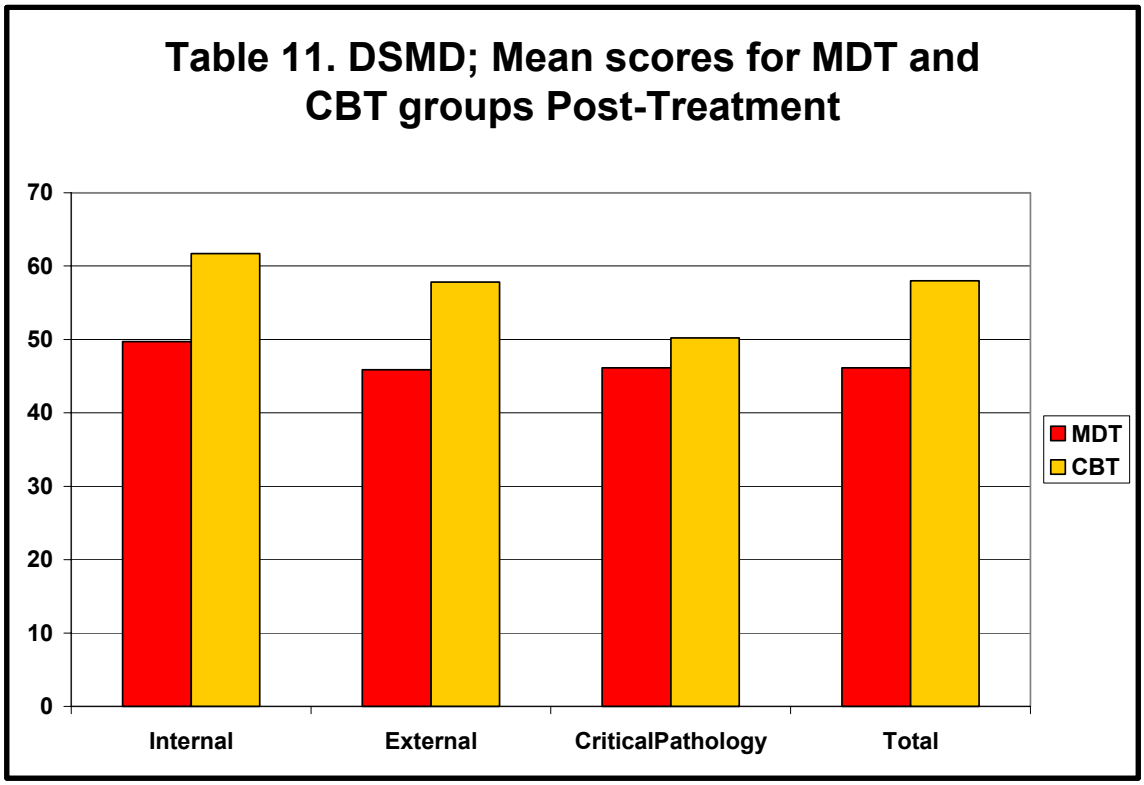




Figure 10 and 11. DSMD; mean scores for MDT and CBT groups Pre-Treatment and Post-Treatment.

## RESULTS

This research study was initiated to compare the efficacy of two different treatment methods for male adolescents in residential treatment for physical and/or sexual aggression. We began the analysis by assessing weekly behavioral reports, which indicated a number of observed sexual or aggressive acts. Once reports were compiled, statistical analysis of the results ensued. It was found that all participants benefited from treatment regardless of theoretical orientation (see table one). The baseline average rate of aggression across all groups was 1.56 with a total standard deviation of .501 and standard error of .065. There was a 74% reduction in rate of aggression to the post treatment mean of .41, with a standard deviation of .495 and standard error of .065. An independent T test was performed on the difference in means. The T-test found a significant difference between the baseline and post-treatment measures $T = 18$, $df = 39$, $p < .01$.

Further analysis was performed on the difference between baseline and post-treatment rates of sexual aggression. The baseline mean across both groups was 1.68 with a total standard deviation of .471 and standard error of .061. There was a 76% reduction in the rate of sexual aggression to the post-treatment mean of .41 with a standard deviation of .495 and standard error of .065. A One-way ANOVA was computed and indicated a significant difference, $F(2,56) = 8.32$, $p < .01$.

There was a significant difference 1SD or better, across all domains of DSMD and CBCL for the MDT group. On the DSMD the MDT total score was reduced to less the 60. This indicates that MDT reduced the score to "not of the level of clinical concern."

On the CBCL both CBT and MDT reduced both internal and external scores. MDT scores on 1 SD or more significance then the CBT scores. These results suggest that MDT might be effective in reducing symptoms of Axis I pathology.

## DISCUSSION

The data indicates that Mode Deactivation Therapy (Apsche and Ward Bailey, 2004a) may achieve superior results to traditional Cognitive Behavioral Therapy (CBT) and Social Skills Training (SST) in reducing both physical aggression and sexual aggression in conduct-disordered and personality-disordered youth in a long-term residential treatment setting. Moreover, while both treatments were effective in reducing physical aggression, only Mode Deactivation Therapy (MDT) demonstrated a significant reduction in rates of sexual aggression. This finding suggests that the technical modifications of cognitive behavioral treatment used in MDT may be better suited to the unique developmental and clinical presentation of these behaviorally disturbed adolescents and yield superior outcomes, especially with regard to sexual abuse issues.

At the same time, several factors may limit the strength of the conclusions drawn from the outcomes. First, the results were derived in a long-term residential treatment

program and may not find replication in less intensive outpatient treatment settings. Second, there are inherent difficulties in identifying "pure" diagnostic types for multiply-challenged youth such as these. While there was striking similarity in the distribution of diagnostic categories across treatment conditions (e.g. Conduct Disorder, Oppositional Defiant Disorder, Personality Disorders), exact matching by diagnosis could not be realistically achieved in this real world setting. Moreover, while all of the youth had documented histories of physical aggression and nearly all had histories of sexual aggression, it was not possible to definitively distinguish individual youth as primarily sex offenders or primarily aggressive youth nor match them accordingly across the two conditions.

As in any real world study, it is always difficult to control for the levels of competence of the participating therapists and their adherence to the "purity" of each of the three treatment methods. Best efforts were made to control for this common problem by ensuring that therapists shared the same professional degree and level of clinical experience in each of the two methodologies and by providing training in the delivery of each model prior to the study. Training was provided by a doctorate level psychologist in both groups. The MDT group was trained by the first author and founder of MDT.

The strength of the outcomes could be further enhanced with the inclusion of additional outcome measures and, ideally, long-term follow-up of the youth who participated in the study. This study measured levels of psychological distress, including internal and external, as measured by the CBCL and DSMD. MDT demonstrated a significant decrease in all levels of behavior and Psychological distress.

It is important to note that the authors do not purport that MDT will generalize to any groups other than youngsters with conduct and personality disorders.

The authors hope that future research may use randomized trials in outpatient clinics and attempt to replicate these findings in other residential treatment facilities and with other relevant adult and adolescent populations, particularly with those identified with severe aberrant behaviors including personality disorders, conduct disorder and aggression. Thus, MDT might be considered in a future studies as a consideration to reduce problems related to Axis I disorders and internal distress.

## REFERENCES

Achenbach, T.M. (1991). *Manual for the Child Behavior Checklist and 1991 profile*. Burlington, VT: University of Vermont Department of Psychiatry.

Achenbach, T.M. (1991). *Child Behavior Checklist, Assessment*. Burlington, VT: University of Vermont Department of Psychiatry.

Alford, B.A. and Beck, A.T. (1997). *The integrative power of cognitive therapy.* New York: Guilford Press.

Apsche, J.A. (2005). Beck's theory of modes. *International Journal of Behavioral Consultation and Therapy*, *1*(1), in press.

Apsche, J.A. (1999). *Thought Change Workbook*. Portsmouth, VA: Alternative Behavioral services.

Apsche, J.A., Evile, M.M., and Murphy, C.J. (2004). The thought change system: An empirically based cognitive behavior therapy for male juvenile sex offenders. A pilot study. *The Journal of Behavior Analysis Today*, *5*(1), 101-107.

Apsche, J.A. and Ward Bailey, S.R. (2004a). Mode Deactivation Therapy: Cognitive-behavioural therapy for young people with reactive conduct disorders or personality disorders or traits who sexually abuse. In M.C. Calder (Ed.), *Children and Young People who Sexually Abuse: New Theory, Research and Practice Developments*, pp. 263-287. Lyme Regis, UK: Russell House Publishing.

Apsche, J.A. and Ward Bailey, S.R. (2003). Mode deactivation therapy: A theoretical case analysis (Part I). *The Journal of the Behavior Analyst Today*, *4*(3), 342-353.

Apsche, J.A. and Ward Bailey, S.R. (2004b). Mode deactivation therapy: A theoretical case analysis (Part II). *The Journal of the Behavior Analyst Today*, *5*(1), 395-434.

Apsche, J.A. and Ward Bailey, S.R. (2004c). Mode deactivation therapy: A theoretical case analysis (Part III). *The Journal of the Behavior Analyst Today*, *5*(3), 314-332.

Beck, A.T. (1996). Beyond belief: A theory of modes, personality and psychopathology. In P.M. Salkovaskis (Ed.), *Frontiers of cognitive therapy*, (pp. 1-25). New York: Guilford Press.

Beck, A.T. and Freeman, A. (1990). *Cognitive therapy of personality disorders.* New York: Guilford Press.

Boesky, L.M. (2002). *Juvenile offenders with mental health disorders: Who are they and what do we do with them?* Lanham, MD: American Correctional Association.

Dodge, K.A., Lochman, J.E., Harnish, J.D., Petti, G.S. (1997). Reactive and proactive aggression in school children and psychiatrically impaired chronically assaultive youth. *Journal of Abnormal Psychology*, *106* (1), 37-51.

Henggeler, S.W., Schoenwald, S.K., Borduin, C.M., Rowland, M.D. and Cunningham, P.B. (1998). *Multisystemic treatment of antisocial behavior in children and adolescents*. New York: Guilford Press.

Johnson, J.G., Cohen, P., Brown, J., Smailes, E.M., and Bernstein, D.P. (1999). Associations between four types of childhood neglect and personality disorder symptoms during adolescence and early adulthood: Findings of a community-based longitudinal study. *Archives of General Psychiatry*, *14*, 171-120.

Kazdin, A.E. and Weisz, J.R. (2003). *Evidenced based psychotherapies for children and adolescents*. New York: Guilford Press.

Koenigsberg, H.W., Harvey, P.D., Mitropoulou, V., Antonia, N.S., Goodman, M., Silverman, J., Serby, M., Schopick, F. and Siever, L. (2001). Are the interpersonal and identity disturbances in the borderline personality disorder criteria linked to the traits of affective instability and impulsivity? *Journal of Personality*, *15*(4), 358-370.

Kohlenberg, R.J. and Tsai, M. (1993). Functional Analytic Psychotherapy: A behavioral approach to intensive treatment. In W. O'Donahue and L. Krasner (Ed)., *Theories of behavior therapy: Exploring behavior change* (pp. 638-640). Washington, D.C.: American Psychological Association.

Linehan, M.M. (1993). *Treating Borderline Personality disorder: The dialectical approach*. New York: Guilford Press.

Naglieri, J.A., LeBuffe, P.A. & Pfeiffer, S.I. (1994). *Devereux scales of mental disorder*. San Antonio: The Devereux Foundation.

Naglieri, J.A., LeBuffe, P.A. & Pfeiffer, S.I. (1994). *Manual of the Devereux scales of mental disorder*. San Antonio: The Devereux Foundation.

Nezu, A.M., Nezu, C.M., Friedman, S.H. and Haynes, S.N. (1998). Case formulation in behaviour therapy: Problem-solving and Functional Analytic strategies. In T.D. Eells (Ed.), *Handbook of psychotherapy case formulation*. New York: Guilford Press.

Swenson, C.C., Henggeler, S.W., Schoenwald, S.K., Kaufman, K.L., and Randall, J. (1998). Changing the social ecologies of adolescent sexual offenders: Implications of the success of multisystemic therapy in treating serious antisocial behavior in adolescents. *Child Maltreatment*, *3*, 330-339.

Young, J.E., Klosko, J.S. and Weishaar, M.E. (2003). *Schema therapy: A practitioner's guide*. New York: Guilford Press.

Author Contact Information:

Jack A. Apsche, Ed.D., ABPP, Brightside for Families and Children, 2112 Riverdale Street, West Springfield, MA 01089. jack.apsche@sphs.com ; jackmdt@aol.com

Christopher K. Bass, Ph.D., Dept of Psychology, Clark Atlanta University, 207 Knowles Hall, Atlanta, GA 30313. cbass@cau.edu

Jerry L. Jennings, Ph.D., Liberty Behavioral Health Corporation, 401 E. City Ave., Suite 820, Bala Cynwyd, PA, 19004.

Alexander M. Siv, MA, CAGS., Brightside for Families and Children, 2112 Riverdale Street, West Springfield, MA 01089. alexmsiv@hotmail.com